

## INSTRUCTIONS FOR MICROBIOLOGY PERFORMANCE EVALUATION STUDIES, 2001

### ALL LABORATORIES

- **Laboratories that are required to participate in performance evaluation studies:**

The following microbiological testing laboratories are required to participate in microbiology performance evaluation studies:

- (1) certified laboratory,
- (2) laboratory seeking certification, or
- (3) laboratory seeking to add a method by amendment.

(Each mobile laboratory is required to participate separately from the stationary/parent laboratory).

- **Performance evaluation (PE) samples to be purchased:**

Where PE samples are available, they must be purchased for each method/subgroup for which a laboratory is certified and/or for which it is seeking certification.

As PE samples are not available for enterococcal methods, Fields of Testing (FoT) 01.10, 01.11, or for enumeration methods using the Quanti-Tray™, FoT 01.16, PE sample testing is not required at this time for these methods.

- **EPA laboratory identification (ID) code:**

Each laboratory, including mobile laboratories associated with stationary laboratories, should have an EPA laboratory ID code. The code is a five-digit number preceded by the state abbreviation.

Your EPA laboratory ID code appears in the upper right hand section of the cover letter and should be kept confidential within your laboratory.

If your laboratory does not have its own EPA laboratory ID code, please contact Fred Choske at (510) 540-2800, so that one can be issued. (Please do not contact the U.S. Environmental Protection Agency directly).

### CERTIFIED LABORATORIES

- The laboratory must purchase performance evaluation samples from one or more of the vendors on the enclosed list and test for the microorganisms by the methods that appear on the laboratory's certificate.
- In order to maintain certification, each year, a laboratory must receive an acceptable rating for all the samples in the set received for the performance evaluation study for each of the certified subgroups.
- Laboratories are advised to participate in the necessary studies during one of the four quarters of the calendar year. The vendor will evaluate your PE samples testing results and send the reports to you and to the certifying authority, the Environmental Laboratory Accreditation Program (ELAP), you indicated on your report. The vendor will send copies of the reports to the attention of Fred Choske, California Department of Health Services,

Environmental Laboratory Accreditation Program, 2151 Berkeley Way, Annex 2, Berkeley, CA 94704.

- If a laboratory receives a “not acceptable” rating for a method, the laboratory must immediately review its work and implement the necessary corrective action and send a summary of that corrective action to the attention of June Kani, California Department of Health Services, Environmental Laboratory Accreditation Program, 2151 Berkeley Way, Annex 2, Berkeley, CA 94704. The corrective action summary should include the laboratory’s determination of the cause(s) for each “not acceptable” rating and the procedural changes necessary to improve future data quality.
- A laboratory that does not participate in performance evaluation studies is not in compliance with the requirements of Health and Safety Code (H&SC) Section 100870 and is automatically rated as “not acceptable.”

#### **NEW CERTIFICATION, REINSTATEMENT, OR AMENDMENT**

- Laboratories seeking certification for the first time, reinstatement of certification, or amendment of certification, must participate in performance evaluation studies, if PE samples for such studies exist, in accordance with H&SC Section 100870.
- The laboratory must purchase performance evaluation samples from one or more of the vendors on the enclosed list and test for the microorganisms by the methods that the laboratory is seeking first time certification, reinstatement of certification, or amendment of certification.
- The laboratory will have up to six (6) months from the date of receipt by ELAP of the laboratory’s application for certification, request for reinstatement of certification, or amendment of certification, to complete the performance studies. The laboratory must receive an acceptable rating for each requested method to meet the certification requirements.
- The vendor will evaluate your PE samples testing results and send the reports to you and to the certifying authority (ELAP) you indicated on your report. The vendor will send copies of the reports to the attention of Fred Choske, California Department of Health Services, Environmental Laboratory Accreditation Program, 2151 Berkeley Way, Annex 2, Berkeley, CA 94704.
- If a laboratory receives a “not acceptable” rating for a method, the laboratory must immediately review its work, implement the necessary corrective action and send a summary of that corrective action to the attention of June Kani, California Department of Health Services, Environmental Laboratory Accreditation Program, 2151 Berkeley Way, Annex 2, Berkeley, CA 94704, before participating in a second performance evaluation study. The corrective action summary should include the laboratory’s determination of the cause(s) for each “not acceptable” rating and the procedural changes necessary to improve future data quality.

## PERFORMANCE EVALUATION SAMPLES

### DRINKING WATER MATRIX -- Total Coliform Rule/Safe Drinking Water Act (SDWA)

- Each sample set consists of 10 samples for coliform (total, fecal, E. coli) testing. These sample sets are for presence/absence methods only.
- One sample set can be used to test for total coliforms, fecal coliforms and/or E. coli by one method. Additional sets must be purchased for additional methods if a laboratory is certified for more than one drinking water method. (MTF, MF, Clark's P-A, Chromo/Fluoro).
- If a laboratory is already certified for the use of both chromogenic/fluorogenic substrate methods (FoT 01.03), Colilert<sup>R</sup>/Colilert<sup>R</sup>-18 and Colisure<sup>TM</sup>, the laboratory needs to test only one set of samples by one of the methods. If a laboratory is seeking certification for both methods, or is seeking to add one method or the other, by the amendment process, then the laboratory needs to test one set of samples for each of both methods.
- Each of the 10 samples in a sample set is a whole (100 ml) volume sample, available as a 100 ml wet sample or as a dehydrated or lyophilized sample that is to be rehydrated to 100 ml.
- The laboratory must follow the sample preparation and handling instructions provided by the vendor.
- The laboratory's EPA laboratory ID code must be indicated on the report form.
- When ordering PE samples, the laboratory should make sure that the vendor is aware that the order is for "PT study samples," not for quality control or other uses.
- Drinking water PE samples may be ordered from the following vendors:

Vendor	Sample Identification
CHRISOPE Tech	QUANTICULT <sup>R</sup> System EPA WS Micro Program for Drinking Water
Environmental Resource Associates	Wat <sup>TM</sup> Supply MicrobE <sup>TM</sup> Samples for Drinking Water
MICROCHECK, Inc	ColiPT <sup>TM</sup> Samples for Drinking Water Presence/Absence methods

## PERFORMANCE EVALUATION SAMPLES (cont.)

### WASTEWATER MATRIX – National Pollutant Discharge Elimination System (NPDES)/Clean Water Act (CWA)

- Each sample set consists of one or more samples for coliform (total and fecal) testing.
- One sample set is sufficient for testing for total and fecal coliforms by the multiple tube fermentation method.
- Since the sample set is sufficient for one method only, additional sets must be purchased if a laboratory is certified for more than one method (e.g., multiple tube fermentation (MTF) and membrane filtration (MF)).
- If a laboratory is certified for both total and fecal coliforms by membrane filtration, contact the vendors to determine whether one sample set is adequate for enumerating coliforms by two MF methods (M-Endo/M-Endo LES and MFC). A second sample set may be needed.
- The laboratory must follow the sample preparation and handling instructions provided by the vendor.
- The laboratory's EPA laboratory ID code must be indicated on the report form.
- When ordering PE samples, the laboratory should make sure that the vendor is aware that the order is for "PT study samples," not for quality control or other uses.
- Wastewater PE samples may be ordered from the following vendors:

Vendor	Sample Identification
CHRISOPE Technologies	QUANTI-CULT <sup>®</sup> System WP Micro Waste Water Sample (CWA)
Environmental Research Associates	WatR <sup>™</sup> Pollution MicrobE <sup>™</sup> for wastewater (CWA)
MICROCHECK, Inc.	ColiPT <sup>™</sup> sample for MFC membrane filtration method only (CWA)

## PERFORMANCE EVALUATION SAMPLES (cont.)

### DRINKING WATER SOURCE/SURFACE WATER MATRIX – Surface Water Treatment Rule (SWTR) /Safe Drinking Water Act (SDWA)

- Since source/surface water methods do not differ from wastewater methods in their performance, Water Pollution (WP) wastewater samples can be used as the PE samples for source/surface water. If a laboratory is certified for multiple tube fermentation and/or membrane filtration for both wastewater and source/surface water matrices, one WP sample set can be analyzed to cover one test method for both matrices.
- As stated under **Wastewater Matrix**, it may be necessary to order more than one sample set if the laboratory is certified for both total and fecal coliforms by membrane filtration. One sample set is sufficient for total and fecal coliforms by multiple tube fermentation.
- Participation in the performance evaluation testing for total coliforms in source water by chromogenic / fluorogenic substrate using the Quanti-Tray™ (FoT 01.16) will not be required at this time.
- **If a laboratory is certified for or seeking certification for a method for source water only, refer to the Wastewater Matrix section for instructions on ordering performance evaluation samples.**

### HETEROTROPHIC PLATE COUNT – Surface Water Treatment Rule (SWTR)/Safe Drinking Water Act (SDWA)

- Each sample set consists of one or more samples.
- The laboratory must follow the sample preparation and handling instructions provided by the vendor.
- When ordering PE samples, the laboratory should make sure that the vendor is aware that the order is for "PT study samples," not for quality control or other uses.
- Heterotrophic Plate Count samples may be ordered from the following vendors:

Vendor	Sample Identification
CHRISOPE Technologies	Quanti-Cult <sup>R</sup> System Heterotrophic Plate Count sample (SWDA)
Environmental Resource Associates	WatR <sup>TM</sup> Supply for Heterotrophic Plate Count sample (SWDA)
MICROCHECK, Inc	ColiPT <sup>TM</sup> Heterotrophic Plate Count sample (SWDA)

## LABORATORY RESPONSIBILITIES

### PERFORMANCE EVALUATION SAMPLES AND REPORTS

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- Check sample container for damages or leaks.
- Check sample integrity.
- Check information on labels and report forms for accuracy.
- Confirm that you have received all the samples/sets ordered.
- Read and follow instructions provided. Call the vendor if clarification is needed.
- Method used for the reported data must be stated on the report.
- Check to see that your correct EPA laboratory ID code is on the report.
- California certificate numbers should not be reported to the vendor.
- Media information for performance evaluation tests must be available for review by ELAP.
- Any question relating to the sample or the report received should be directed to the vendor.
- Check your evaluated report carefully for the accuracy of the provided information. If any errors are detected, contact the vendor immediately so that they may be rectified and a corrected report provided to the laboratory and to ELAP.
- The information provided on your report varies with the vendor. At a minimum, the report should have the following information:

Vendor's name, ID number, address, telephone, fax  
Type of sample, matrix  
Study dates (commencement and conclusion), study number  
Laboratory participant name, city, state  
If mobile – the license number, vehicle ID number  
EPA laboratory ID code  
Method of analysis  
Sample contents  
Reported results  
Acceptance range for enumeration methods  
Mean, true value, or assigned value  
Evaluation

## **PROBLEMS/COMMENTS**

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- If any problems occur regarding the samples or the instructions from the vendor, the laboratory should first contact the vendor to resolve the problems. If your problems are not resolved to your satisfaction, then you should obtain performance evaluation samples from another vendor and report the problems to Fred Choske.
- The failure rates for particular study samples may not indicate inappropriately prepared samples or other sample problems. If your laboratory does suspect sample problems and has analytical or other supporting evidence, then report such information in writing to Fred Choske.
- Please report your problems and/or send your comments to:

Fred Choske  
California State Department of Health Services  
Environmental Laboratory Accreditation Program  
2151 Berkeley Way, Annex 2  
Berkeley, CA 94704

**NIST APPROVED VENDORS LIST  
MICROBIOLOGY PERFORMANCE EVALUATION STUDY  
(May 2001)**

Vendor	Address/Telephone/FAX/ E-Mail	Contact
CHRISOPE Technologies (A Division of Remel)	3941 Ryan Street Lake Charles, LA 70605 tel: (800) 256-4376 (ext. 203) fax (337) 479-1006 e-mail: <a href="mailto:tstokeld@remelinc.com">tstokeld@remelinc.com</a>	Theresa D. Stokeld
ERA – Environmental Resource Associates	5540 Marshall Street Arvada, CO 80002 tel: (800) 372-0122 fax: (303) 421-0159 e-mail: <a href="mailto:qcstds@aol.com">qcstds@aol.com</a>	Chuck Wibby
MICROCHECK, Inc	P.O. Box 456 Northfield, VT 05664 tel:(802) 485-6600 (ext. 26) fax: (802) 485-6100 e-mail: <a href="mailto:info@microcheck.com">info@microcheck.com</a>	Carrie Pontbriand

**NOTE:** The Environmental Laboratory Accreditation Program (ELAP) does not have a contract with any of the listed vendors regarding the microbiology performance evaluation study. The mention of products, services, or vendors does not constitute any endorsement by ELAP for such products, services, or vendors.